

**What is claimed is:**

1. A method for generating a constant voltage, comprising the steps of:

generating a reference voltage;

removing short wave noises from the reference voltage;

generating an output voltage;

generating a control signal based on the reference voltage and the output voltage; and

controlling the output voltage in response to the control signal to provide a constant output voltage.

2. A method for generating a constant voltage, comprising the steps of:

generating a reference voltage;

generating an output voltage;

generating a control signal based on the reference voltage and the output voltage; and

removing short wave noises from the control signal to provide a second control signal;

controlling the output voltage in response to the second control signal to provide a constant output voltage.

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3. A method for generating a constant voltage, comprising the steps of:

- generating a reference voltage;
- generating an output voltage;
- extracting short wave noises from the reference voltage;
- supplying the extracted noises into the output voltage;
- generating a control signal based on the reference voltage and the output voltage; and
- controlling the output voltage in response to the control signal to provide a constant output voltage.

4. A constant voltage generation device, comprising:

- a reference voltage generation circuit which generates a reference voltage;
- an output circuit which generates an output voltage;
- a differential amplifier which generates a control signal based on the reference voltage and the output voltage; and
- a noise control circuit which removes short wave noises from the reference voltage, to be supplied to the differential amplifier, wherein the output voltage is controlled in response to the control signal to provide a constant output voltage.

5. The constant voltage generation device, according to claim 4, wherein

the noise control circuit comprises a resistor serially connected between the reference voltage generation circuit and a first input terminal of the differential amplifier.

6. The constant voltage generation device, according to claim 5,  
wherein

the noise control circuit further comprises a capacitor, which is connected at an electrode to a first terminal and at the other electrode to the first input terminal of the differential amplifier.

7. The constant voltage generation device, according to claim 6,  
wherein

the first terminal is grounded.

8. The constant voltage generation device, according to claim 6,  
wherein

the capacitor is a variable type of capacitor, and the resistor is a variable type of resistor.

9. The constant voltage generation device, according to claim 4,  
wherein

the noise control circuit comprises a transistor serially connected at source and drain between the reference voltage generation circuit and a first input terminal of the differential amplifier; and a capacitor connected

at an electrode to the transistor and at the other electrode to the first input terminal of the differential amplifier.

10. A constant voltage generation device, comprising:
  - a reference voltage generation circuit which generates a reference voltage;
  - an output circuit which generates an output voltage;
  - a differential amplifier which generates a control signal based on the reference voltage and the output voltage; and
  - a noise control circuit which removes short wave noises from the control signal to provide a second control signal, wherein
    - the output voltage is controlled in response to the second control signal to provide a constant output voltage.

11. The constant voltage generation device, according to claim 10, wherein

the noise control circuit comprises a resistor serially connected between an output terminal of the differential amplifier and an input terminal of the output circuit; and a capacitor connected between a second terminal and the output terminal of the differential amplifier.

12. The constant voltage generation device, according to claim 11, wherein

the second terminal is grounded.

13. A constant voltage generation device, comprising:
- a reference voltage generation circuit which generates a reference voltage;
  - an output circuit which generates an output voltage;
  - a differential amplifier which generates a control signal based on the reference voltage and the output voltage; and
  - a first noise control circuit which removes short wave noises from the reference voltage; and
  - a second noise control circuit which removes short wave noises from the control signal to provide a second control signal, wherein
    - the output voltage is controlled in response to the second control signal to provide a constant output voltage.

14. The constant voltage generation device, according to claim 13, wherein

the first noise control circuit comprises a first resistor serially connected between the reference voltage generation circuit and a first input terminal of the differential amplifier; and a first capacitor connected between a first terminal and the first input terminal of the differential amplifier; and

the second noise control circuit comprises a second resistor serially connected between an output terminal of the differential amplifier and an input terminal of the output circuit; and a second capacitor connected between a second terminal and the output terminal of the differential

amplifier.

15. The constant voltage generation device, according to claim 14, wherein

each of the first and second terminals is grounded.

16. A constant voltage generation device, comprising:  
a reference voltage generation circuit which generates a reference voltage;

an output circuit which generates an output voltage;  
a differential amplifier which generates a control signal based on the reference voltage and the output voltage; and  
a noise control circuit which extracts short wave noises from the reference voltage, to be supplied to a first input terminal of the differential amplifier, and supplies the extracted noises into the output voltage, to be supplied to a second input terminal of the differential amplifier, wherein  
the output voltage is controlled in level in response to the control signal to provide a constant output voltage.

17. The constant voltage generation device, according to claim 16, wherein

the noise control circuit comprises a capacitor connected between the first input terminal and the second input terminal of the differential amplifier so that an effect of the short wave noises is cancelled.

18. The constant voltage generation device, according to claim 16,  
wherein

the noise control circuit is a high-pass filter, which is connected  
between the first and second input terminals of the differential amplifier.

19. The constant voltage generation device, according to claim 16,  
further comprising:

a second noise control circuit which removes short wave noises  
from the reference voltage.

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